APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,168	11/20/2003	Peter F. Symosek	H0003798 (1100.1204101)	9337

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EXAMINER
GEBRESILASSIE, KIBROM K

ART UNIT	PAPER NUMBER
2128	

MAIL DATE	DELIVERY MODE
09/15/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>21 May 2008</u>.

2a)☒ This action is FINAL.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>7-9 and 23-32</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>7-9 and 23-32</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>19 April 2004</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   This communication is responsive to amended application filed on 05/21/2008.

2.   Claims 7-9, and 23-32 are presented for examination.

Response to Arguments

3.   Applicants are thanked for arguments/Remarks.

4.   Applicant's amendment relating to 112 rejection is persuasive and therefore the rejection is **withdrawn.**

5.   Applicant's argument relating to 101 rejection is not persuasive and therefore the rejection is **maintained.** Although claim 7 is drawn to a machine, it does not provide for a practical application that produces useful, tangible and concrete result.

6.   Applicant's argument relating to art rejection is not persuasive.

    a.   In response, as applicants indicated the reference is dated back to March 2000 as shown in the right corner of each pages. Further, the reference (Jodeit et al) is used as reference to other document which dated on September 2001 as seen below:

SUPPORTING CB STANDOFF DETECTION SYSTEM ACQUISITION WITH MODELING &
SIMULATION

Dr. John R. White
Edgewood Chemical Biological Center—Soldier and Biological Chemical Command
Aberdeen Proving Ground, MD

Dennis L. Jones, Michael J. O'Connor, and David M. Jodeit
ITT Industries
Alexandria, VA

5th Joint Conference on Standoff Detection for Chemical & Biological Defense   September 2001

REFERENCES

i Jodeit, D.M., Jones, D.L., Ryan, R.F., *et al.* "Use of Environment Simulation to Support Passive Chemical Sensor Development," paper 00S-SIW-022 presented at the Spring 2000 Simulation Interoperability Standards Organization Simulation Interoperability Workshop, Orlando, FL, March 2000.

ii Liebert, R., O'Connor, M.J., Jones, D.L. *et al.* "Use of a Virtual Biological Threat Environment to Support Test and Evaluation (T&E) of the Biological Aerosol Warning System (BAWS) in the Integrated Biodetection Advanced Technology Demonstration (Bio ATD)," paper DEC99-ITEA-037 presented at the 1999 Annual ITEA Workshop "Using Modeling and Simulation for Testing—Are We Ready for the Next Millennium?," Las Cruces, NM. December 1999.

iii O'Connor, M.J., Jones, D.L., *et al.* "Developing Biological Hazard Detection Tactics, Techniques, and Procedures Using Distributed Simulation," paper 98F-SIW-140 presented at the Fall 1998 Simulation Interoperability Standards Organization Simulation Interoperability Workshop, Orlando, FL, September 1998.

iv McCullough, W.A., O'Connor, M.J., Jones, D.L., *et al.* "Using a Computer Simulation to Refine Tactics, Techniques, and Procedures for the XM94 Long Range Biological Standoff Detection System," October 1998.

v *Ibid.*

The document is published prior to applicants claimed invention and therefore it is proper to use as a reference to reject the claimed invention.

b.   Applicants argued that Jodeit et al fails to disclose the computer system comprises *a numerical computing tool and an atmospheric transmittance and radiance model.*

In response, applicants clearly admitted that they used a very known techniques such a matlab as a computing tool and MODTRAN as model atmospheric transmission and radiance (See: Applicant Specification pg. 6 line 22 through pg. 7 line 5, pg. 14 lines 6-11).

    MPEP 2129 states:

    "A statement by an applicant >in the specification or made< during prosecution identifying the work of another as "prior art" is an admission **>which can be relied upon for both anticipation and obviousness determinations,

> **regardless of whether the admitted prior art would**
> **otherwise qualify as prior art under the statutory**
> **categories of 35 U.S.C. 102.** Riverwood Int 'l Corp. v. R.A.
> Jones & Co., 324 F.3d 1346, 1354, 66 USPQ2d 1331, 1337
> (Fed. Cir. 2003); Constant v. Advanced Micro-Devices Inc.,
> 848 F.2d 1560, 1570, 7 USPQ2d 1057, 1063 (Fed. Cir. 1988).
>   Consequently, the examiner must determine whether the
> subject matter identified as "prior art" is applicant's own
> work, or the work of another. In the absence of another
> credible explanation, examiners should treat such subject
> matter as the work of another."

In this case, applicants have not invented the computing tool (matlab) and model atmospheric transmission and radiance (MODTRAN), and have merely applied a known technique to improve a simulator system. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the simulator system of the teachings of Jodeit et al to include known techniques such as a matlab and MODTRAN to compute and model atmospheric transmission and radiance.

c.   Applicants argued that Jodeit et al fails to disclose *evaluating the sensitivity of the sensor to a variety of threats*.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

      d.   Applicants argued:

"The fact that known elements could have been incorporated into a simulation model and the simulation model could have been embodied in a simulation device is **not sufficient to** *establish prima facie* **obviousness**. (MPEP 2143.01, III.)."

However,
     "In determining whether the subject matter of a patent claim is obvious, neither the particular motivation nor the avowed purpose of the patentee controls. <u>What matters is the objective reach of the claim. If the claim extends to what is obvious, it is invalid under §103.</u> One of the ways in which a patent's subject matter can be proved obvious is by noting that there existed at the time of invention a known problem for which there was an obvious solution encompassed by the patent's claims." *KSR Int'l v. Teleflex, Inc.,* 550 U.S. ___ (2007).

      In this case, applicants clearly admitted that the two techniques such as matlab (i.e. computing tool) and MODTRAN (i.e. model atmospheric transmission and radiance) are known techniques (See: Applicant Specification pg. 6 line 22 through pg. 7 line 5, pg. 14 lines 6-11). One of ordinary skill in the art would have been capable of applying known techniques (matlab and MODTRAN) to the simulator system of Jodeit et al where the result would have been predictable to one of ordinary skill in the art. The Supreme Court in *KSR* noted that "*if the actual application of the technique would have been beyond the skill of one ordinary skill in the art, then using the technique would not have been obvious.*"

Claim Rejections - 35 USC § 101

7.   35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

8.   Claims 7-9, and 23-32 are rejected under 35 U.S.C. 101 because the claimed

invention is directed to non-statutory subject matter since the claims as a whole do not

provide a practical application that produce a useful, tangible and concrete result. The

independent claim recites"chemical agent detection", but it is not applied to the real

world application that has been held to be useful, concrete, and tangible result. (MPEP

2106: State Street Bank & Trust Co. v. Signature Financial Group

Inc., 149 F.3d 1368, 1373-74, 47 USPQ2d 1596, 1601-02 (Fed. Cir.

1998).(**the "transformation data" "by a machine" "into a final**

share price, constitutes a practical application of a

mathematical algorithm, formula, or calculation" because "a

final share price (i.e. real world value) is momentarily fixed

for recording and reporting purposes and even accepted and

relied upon by regulatory authorities and in subsequent trades").

Applicants Own Admissions

9.   Applicant's specification states:

        Page 4:

> 5   configuration and/or performance evaluation environment to test
>   sensors, detectors, and related systems. One detector, sensor
>   or system that may be tested is a Joint Services lightweight
>   stand-off chemical agent detector (JSLSCAD). The JSLSCAD may be
>   regarded as a state-of-the-art interferometer-based chemical
> 10 agent detector having baseline chemical agent detection
>   algorithms. Although the present simulator may be used for
>   testing many kinds of sensors, detectors and systems, the
>   JSLSCAD may be considered as an example detector that may be
>   provided simulated chemical agent signatures.

Pages 6-7:

> A block diagram of simulation 25 is shown in Figure 3. The
> 20 major components of simulation 25 may include sensor response
> removal 24, spectral characteristics addition 27, atmospheric
> attenuation 28, MODerate-resolution atmospheric TRANsmittance and
>
> radiance model (MODTRAN) 23, and sensor response addition 29.
> MODTRAN is a FORTRAN-like computer code designed to determine or
> model atmospheric transmission and radiance. MODTRAN was
> developed principally by the U.S. Air Force Research
> Laboratories. Simulation 25 may include sensor response removal

Page 14:

> The assumptions and requirements needed to complete the
> simulation software may include a local, executable MODTRAN
> (version 3.7) which can be invoked by the simulation software,
> an executable MATLAB® (version 5.2) and its signal processing
> toolbox which can be invoked by the simulation software. MATLAB®
> (Matlab) may be used as a numerical computing tool. The

Claim Rejections - 35 USC § 103

10.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating
     obviousness or nonobviousness.

11.   Claims 7-9, and 23-32 are rejected under 35 U.S.C. 103(a) as being

unpatentable over D. M. Jodeit, D. L. Jones, R. McMahon,..."Use of Environment

Simulation to Support Passive Chemical Sensor Development", (herein referred as

Jodeit et al), March 2000, in view of Applicants Admission (herein referred as AOA).

12.   Claims 1-4, (Canceled).

13.   Claims 5-6, (Withdrawn).

14.   Claim 7, Jodeit discloses a simulator system comprising:

a chemical agent detection environment simulation device (such as ...*the

JSLSCAD is a 360-degree scanning, detect-on-the-move, passive standoff chemical

detector that operates on a variety of platforms*...; See: Abstract);

a user interface connected to the chemical agent detection environment

simulation device (See: Fig. 1);

a background measurement environment interferogram source connected to the

chemical agent detection environment simulation device (such as *JSLSCAD*...;See:

Abstract);

Jodeit et al fails expressly to disclose a numerical computing tool and an atmospheric transmittance and radiance model.

AOA discloses a numerical computing tool, an atmospheric transmittance and radiance model (such as *matlab and MODTRAN..*;See: Applicant Specification pg. 6 line 22 through pg. 7 line 5, pg. 14 lines 6-11).

It would have been obvious to one of ordinary skill in the art to connect the prior art numerical computing tools including Matlab and MODTRAN software to the teaching of Jodeit et al to compute the simulation model, atmospheric transmission and radiance.

15.   Claim 8, Jodeit et al discloses the system of claim 7, further comprising an ancillary information source connected to the chemical agent detection environment simulation device (See: 2.1 JSLSCAD simulator).

16.   Claim 9, Jodeit et al discloses the system of claim 8, wherein: files are input to the atmospheric transmittance and radiance model from the chemical agent detection simulation device environment (such as *...the input file defines entity to attach to: maximum sensor range, and time steps...*; See: 2.1 JSLSCAD simulator); and atmospheric model information is input to the chemical agent detection environment simulation device from the atmospheric transmittance and radiance model (such as *...the input file defines entity to attach to: maximum sensor range, and time steps...*; See: 2.1 JSLSCAD simulator).

17.   Claims 10-22: (Withdrawn)

18.   Claim 23, Jodeit et al discloses the system of claim 7, wherein the chemical agent detection environment simulation device includes simulated sensor output (such

as …*the output file consists of: for example, sensor orientation, current sensor Scan*

Range…; See: "2.1 JSLSCAD Simulator", "2.4 ModSAF").

19.   Claim 24, Jodeit et al discloses the system of claim 23, wherein the numerical

computing tool is configured to test the sensor output with one or more algorithms (such

as ….*calculating multiple sensor lines for each time step…modifying these functions*

and recompiling the LDS, it can be easily reconfigured to allow the end user to test out a

JSLSCAD with different scan patterns and/or sensor characteristics...; See: "2.1

JSLSCAD Simulator").

20.   Claim 25, AOA discloses the system of claim 7, further comprising a cloud

radiance and transmittance module (such as *MODTRAN*; See: Applicant Specification

pg. 6 line 22 through pg. 7 line 5).

21.   Claim 26, AOA discloses the system of claim 7, numerical computing tool is a

Matlab® module (Such as *Matlab*; See: Applicant Specification pg. 14 lines 6-11).

22.   Claim 27, AOA discloses the system of claim 7, wherein the atmospheric

transmittance and radiance module is a MODTRAN module (such as *MODTRAN*; See:

Applicant Specification pg. 6 line 22 through pg. 7 line 5).

23.   Claim 28, Jodeit et al discloses the system of claim 7, wherein the chemical

agent detection environment simulation device includes: an input stage; a preparation

stage; a calibration stage; and a simulation stage (See: "2.1 JSLSCAD Simulator"); and

wherein the simulation stage comprises: a background spectrum; an atmospheric

model; a cloud model; and a simulated spectrum builder (See: "2.1 JSLSCAD

Simulator").

24.   Claim 29, AOA discloses the system of claim 28 wherein the calibration stage

comprises: computing an ambient blackbody spectrum; computing a theoretical ambient

blackbody spectrum; and computing a calibrated background spectrum (See:

Specification page 8 lines 10-13).

25.   Claim 30, AOA discloses the system of claim 29, wherein the calibration stage is

configured to compute a liquid nitrogen (LN2) reference spectrum (See: Specification

page 8 lines 10-13).

26.   Claim 31, Jodeit et al discloses the system of claim 7, further comprising a

sensor response removal module (such as See: 2.1 JSLSCAD simulator).

27.   Claim 32, Jodeit et al discloses the system of claim 31, further comprising a field

data source and a sensor response source each connected to the sensor response

removal module (See: 2.1 JSLSCAD simulator).

Conclusion

28.   All claims are rejected.

29.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

30.   **Examiner Remarks:** Examiner has cited particular columns and line numbers in

the references applied to the claims above for the convenience of the applicant.

Although the specified citations are representative of the teachings of the art and

are applied to specific limitations within the individual claim, other passages and

figures may apply as well. It is respectfully requested from the applicant in preparing

responses, to fully consider the references in their entirety as potentially teaching all or

part of the claimed invention, as well as the context of the passage as taught by the

prior art or disclosed by the Examiner.

31.   **Examiner Request: In the case of amending the claimed invention,**

Applicant is respectfully requested to indicate the portion(s) of the specification

which dictate(s) the structure relied on for proper interpretation and also to verify and

ascertain the metes and bounds of the claimed invention.

> **MPEP states:**

> "...with respect to newly added or amended claims, applicant
> should show support in the original disclosure for the new
> or amended claims. See MPEP § 714.02 and § 2163.06."

32.   **Requests for Interview**: In accordance with 37 CFR 1.133(a)(3), requests for

interview must be made in advance. Interview requests are to be made by telephone

(571-272-8571) or FAX (571-273-8571). Applicants must provide a detailed agenda as

to what will be discussed (generic statement such as "discuss §102 rejection" or

"discuss rejections of claims 1-3" may be denied interview). The detail agenda along

with any proposed amendments is to be written on a PTOL-413A or a custom form and

should be faxed (or emailed, subject to MPEP 713.01.I / MPEP 502.03) to the Examiner

at least 3 days prior to the scheduled interview. Interview requests submitted within

amendments may be denied because the Examiner was not notified, in advance, of the

Applicant Initiated Interview Request and due to time constraints may not be able to

review the interview request to prior to the mailing of the next Office Action.

Communications

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Kibrom K. Gebresilassie whose telephone number is

571-272-8571. The examiner can normally be reached on 8:00 am - 4:30 pm Monday

to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Kamini S. Shah can be reached on 571-272-2279. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kamini S Shah/

Supervisory Patent Examiner, Art Unit 2128

/Kibrom K Gebresilassie/
Examiner, Art Unit 2128